

CHAPTER 1. Solving Equations and Inequalities

1. The Distributive Property
2. Solving Multi-Step Equations
3. Solving Equations With Variables on Both Sides
4. Literal Equations and Formulas
5. Ratios, Rates, and Conversions
6. Solving Proportions
7. Solving Multi-Step Inequalities
8. Compound Inequalities
9. Absolute Value Equations and Inequalities

CHAPTER 2. An Introduction to Functions

1. Using Graphs to Relate Two Quantities
2. Patterns and Linear Functions
3. Patterns and Nonlinear Functions
4. Graphing a Function Rule
5. Writing a Function Rule
6. Formalizing Relations and Functions
7. Arithmetic Sequences

CHAPTER 3. Linear Functions

1. Rate of Change and Slope
2. Direct Variation
3. Slope-Intercept Form
4. Point-Slope Form
5. Standard Form
6. Slopes of Parallel and Perpendicular Lines
7. Graphing Absolute Value Functions

CHAPTER 4. Systems of Equations and Inequalities

1. Solving Systems by Graphing
2. Solving Systems Using Substitution
3. Solving Systems Using Elimination
4. Applications of Linear Systems
5. Linear Inequalities
6. Systems of Linear Inequalities

CHAPTER 5. Exponential and Radical Functions

1. Zero and Negative Exponents
2. Exponential Functions
3. Comparing Linear and Exponential Functions
4. Exponential Growth and Decay
5. Solving Exponential Equations
6. Geometric Sequences
7. Combining Functions

8. Simplifying Radicals
9. Radical and Piecewise Functions

CHAPTER 6. Data Analysis

1. Frequency and Histograms
2. Measures of Central Tendency and Dispersion
3. Box-and-Whisker Plots
4. Scatter Plots and Trend Lines
5. Two-Way Frequency Tables

CHAPTER 7. Tools of Geometry

1. Nets and Drawings for Visualizing Geometry
2. Points, Lines, and Planes
3. Measuring Segments
4. Measuring Angles
5. Exploring Angle Pairs
6. Midpoint and Distance in the Coordinate Plane

CHAPTER 8. Transformations

1. Translations
2. Reflections
3. Rotations
4. Compositions of Isometries

CHAPTER 9. Connecting Algebra and Geometry

1. Perimeter and Area in the Coordinate Plane
2. Areas of Parallelograms and Triangles
3. Areas of Trapezoids, Rhombuses, and Kites
4. Polygons in the Coordinate Plane

CHAPTER 10. Reasoning and Proof

1. Basic Constructions, no exercises available
2. Patterns and Inductive Reasoning
3. Conditional Statements
4. Biconditionals and Definitions
5. Deductive Reasoning
6. Reasoning in Algebra or Geometry
7. Proving Angles Congruent

CHAPTER 11. Proving Theorems About Lines and Angles

1. Lines and Angles
2. Properties of Parallel Lines
3. Proving Lines Parallel
4. Parallel and Perpendicular Lines
5. Parallel Lines and Triangles
6. Constructing Parallel and Perpendicular Lines (no exercises available)

CHAPTER 12. Congruent Triangles

1. Congruent Figures
2. Triangle Congruence by SSS and SAS
3. Triangle Congruence by ASA and AAS
4. Using Corresponding Parts of Congruent Triangles
5. Isosceles and Equilateral Triangles
6. Congruence in Right Triangles
7. Congruence in Overlapping Triangles
8. Congruence Transformations

CHAPTER 13. Proving Theorems About Triangles

1. Midsegments of Triangles
2. Perpendicular and Angle Bisectors
3. Bisectors in Triangles
4. Medians and Altitudes
5. Indirect Proof
6. Inequalities in One Triangle
7. Inequalities in Two Triangles

CHAPTER 14. Proving Theorems About Quadrilaterals

1. The Polygon Angle-Sum Theorems
2. Properties of Parallelograms
3. Proving That a Quadrilateral Is a Parallelogram
4. Properties of Rhombuses, Rectangles, and Squares
5. Conditions for Rhombuses, Rectangles, and Squares
6. Trapezoids and Kites
7. Applying Coordinate Geometry
8. Proofs Using Coordinate Geometry